

Allens Harbor Subwatershed

Harwich, Cape Cod, Massachusetts

The Allens Harbor Subwatershed is a small watershed in the Town of Harwich with an area of 394 acres. Allens Harbor opens to Nantucket Sound through Doanes Creek. Route 28 runs through the center of the subwatershed.

Allens Harbor is seasonally open to shellfishing, but the open period is getting shorter due to water quality problems. Data collected over the past five years by the Town of Harwich Natural Resources Department show a persistently high level of fecal coliform that appears to be unrelated to rainfall. The levels of bacteria are particularly high in the area above Lower County Road and at Route 28. During Summer 2002 fecal coliform bacteria counts were consistently higher than 1,000 parts per million (ppm) with counts as high as 3,000 ppm.

The Town of Harwich water system is supplied by twelve wells located in south, east, and north Harwich, which draw water from the Monomoy Lens aquifer. Approximately 90% of the town is supplied by public water. The need for additional water storage in Harwich led to the purchase of land for a water tower north of Aunt Edies Pond in 2000, but plans to borrow \$3.1 million to build the tank have been put on hold.

There are no public sewers in Harwich. In 2002, the Harwich Planning Board was beginning to hold informal discussions on how best to solve wastewater contamination of the Town's harbors.

Harwich has 5,000 acres of vacant developable land. If one-half of that is protected, it would mean that 26 percent of the total available upland would be set aside in the town. Currently, just eight percent of available open space is preserved in Harwich.

Stewards:

- Harwich Shellfish and Marine Water Quality Committee
(www.vsv.cape.com/~harharb/main6.html)

Studies conducted in the watershed:

- Cape Cod Wetlands Investigation. June 1996. US Army Corps of Engineers, New England Division. Site was 17 acres of tidal wetlands at Kildee Road/Route 28.
- Cape Cod Coastal Embayment Project (A Nitrogen Loading Analysis of Allens Harbor). 1998. Cape Cod Commission.
- Cape Cod Atlas of Tidally Restricted Salt Marshes. 2001. Cape Cod Commission.
- Source Water Assessment and Protection (SWAP) Report for Harwich water supplies. Nov. 2001. MA Department of Environmental Protection. The SWAP report identifies land uses within water supply protection areas that may be potential sources of contamination. Available from DEP online at <http://www.state.ma.us/dep>.
- Stearns and Wheler is conducting a study identifying potential sources of the high fecal coliform bacteria readings in Allen Harbor. The study includes an analysis of water quality, nearby septic systems, stormwater runoff, and the presence of waterfowl.

Who is collecting water quality data and where:

- Division of Marine Fisheries, Harwich Natural Resources Department, and water quality volunteers: Allens Harbor proper – middle, Oyster Creek, near Lower County Bridge, near Hulse Point, tide gauge at Route 28.
- Harwich Natural Resources Department proposed in 2001 to expand upon the current sampling locations and begin monitoring many of the 33 ponds in Harwich. Samples will be analyzed for the nitrogen series, orthophosphates, total phosphates and chlorophyll a.

Management actions taken:

- The coastal waters of Harwich were designated a No Discharge Area by the state. The discharge of all boat wastewater, even if it is treated, is prohibited.
- Harwich Conservation Trust developed a priority open space project with the help of The Compact of Cape Cod Conservation Trusts. The project identified the top 200 parcels for open space acquisition. The top 20 undeveloped parcels total 290 acres and contain threatened wildlife habitat. The total assessed value of the land is \$6 million.
- 10,000 cubic yards of material was dredged from the Allens Harbor channel in November 2002. Materials were pumped to the west of the harbor entrance to nourish town beaches.

Subwatershed facts: (For data sources see the Appendix)

- 21 E sites: 1 – Sunoco Service Station, Main St. Harwich (tier 2)
- Solid waste sites: none
- Zone IIs located in this watershed: none
- Interim Wellhead Protection Areas (IWPAs): none
- Percent of the undeveloped land that is protected (according to 1985/1990 data): 10.3%
- Acres of existing wetlands: 23
- Certified vernal pools: none
- Named freshwater ponds: none
- Named rivers or creeks: Doane's Creek
- Shellfish growing areas: The northern portion of Allens Harbor is prohibited to shellfish harvesting. The rest of Allens Harbor and Doane's Creek are conditionally approved.
- This watershed contains Natural Heritage and Endangered Species Program (NHESP) Estimated Habitats of Rare Wildlife along part of its eastern border.

Priorities:

- Initiate water quality monitoring program in Allens Harbor for nutrients and bacteria to participate in the Estuaries Project, Southeastern Massachusetts Embayment Restoration. Work with Estuaries Project to develop a QAPP.
- Conduct a detailed sanitary survey of the subwatershed to identify the potential sources of contamination, including analysis of human versus animal sources.
- Identify storm discharges and assess their role in the water quality problems in Allens Harbor.
- Prepare maps of the subwatershed including aerial photos to allow a clear understanding of the physics of the system.
- Conduct public education about sources of water quality problems in the subwatershed.
- Evaluate techniques for controlling algal blooms.

- The Town of Harwich should continue to purchase potentially developable land located within the existing wellhead protection areas and areas for use as future well sites (SWAP Report, 2001).
- Examine whether dredging could help tidal flushing in Allens Harbor (Division of Marine Fisheries [DMF] Sanitary Surveys). Identify location for disposal of dredge material.
- Control waterfowl in Allens Harbor to protect shellfishing resource (DMF Sanitary Surveys).
- Examine and remediate impacts from drain pipe at Hulse Point Road. This pipe drains a residential area (DMF Sanitary Surveys).
- Address first flush impacts at town parking lot at Lower County Road (DMF Sanitary Surveys).
- Preserve open space as identified in the Harwich Conservation Trust priority open space project.
- Acquire open space. Parcels considered a priority for acquisition for water supply protection and development: Harwich Tracts 8, 10, 11, 18, 19, 23, 30, 31, 34, 35, 36, 37, 39, and 41 were ranked as having medium or high water supply development potential in the Cape Cod Commission's *Priority Land Acquisition Assessment Project* (April 1999). These tracts are located throughout the Town of Harwich.
- Implement those salt marsh restoration projects identified in the 2001 *Cape Cod Atlas of Tidally Restricted Salt Marshes* that have been evaluated and prioritized by the town. The site located within this subwatershed is the Kildee Road restriction of channel off Allens Harbor/Doane's Creek (HA-5).

Recreation:

Camping areas: none

Golf courses: Harwich Port Golf Club

Pathways and trails:

- www.capecodcommission.org/pathways/trailguide.htm

Public access:

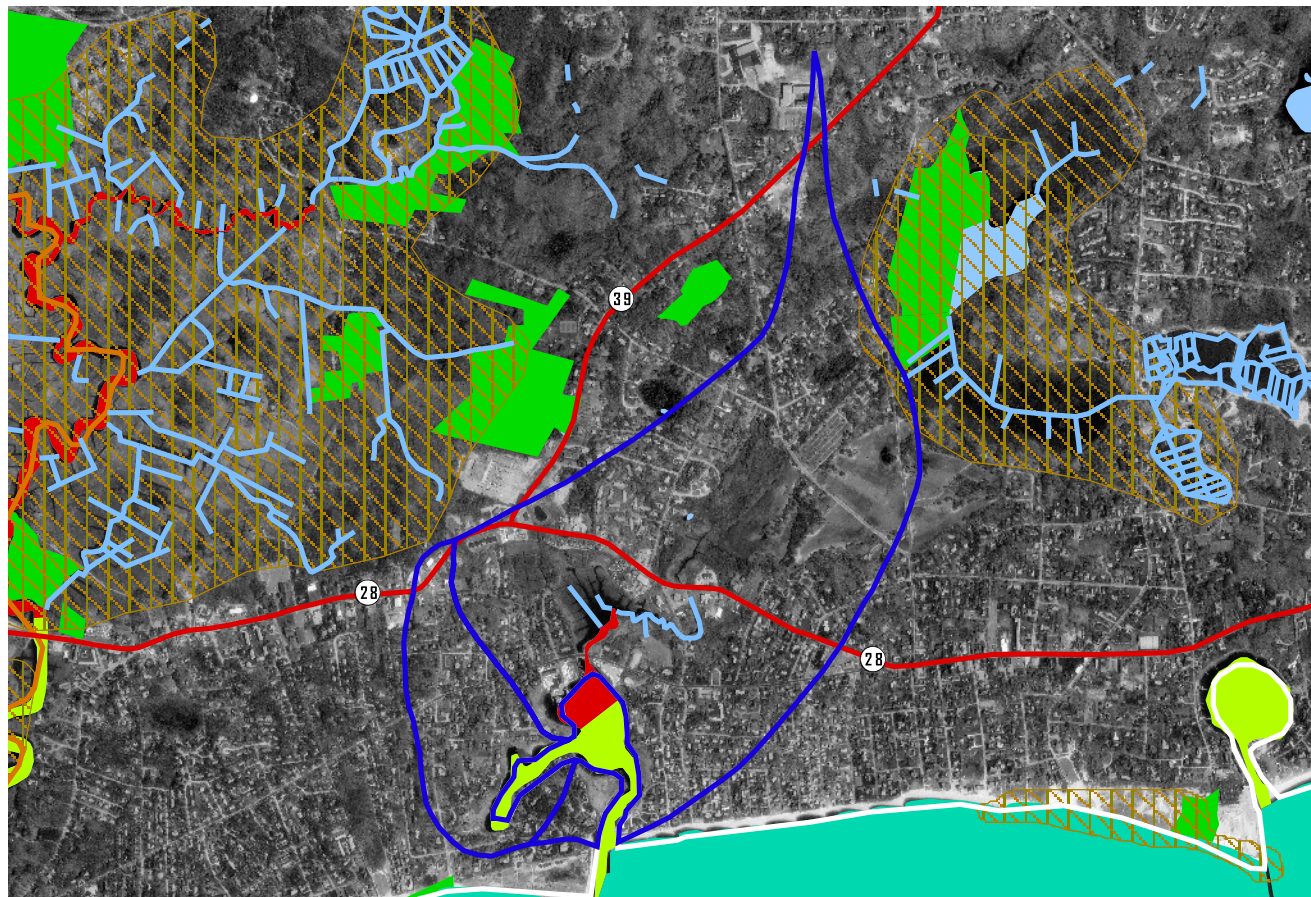
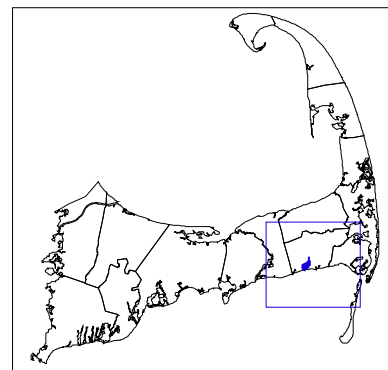
- www.state.ma.us/dfwele/pab/pabSEmap.htm

Public beaches and landings:

- Landing on harbor
- No beaches

Allens Harbor

Harwich, MA



Watershed Resources



0 0.25 0.5 Miles

Natural Heritage and Endangered Species Program Data

- Certified Vernal Pool
- Priority Habitats of Rare Species
- Estimated Habitats of Rare Species

Groundwater Protection Areas

- Interim Wellhead Protection Area
- Zone II
- Solid Waste Facility

Watershed Boundary

Anadromous Fish Run

Shellfish Growing Areas

- APPROVED
- CONDITIONALLY APPROVED
- MANAGEMENT CLOSURE
- PROHIBITED
- RESTRICTED

Open Space

Streams

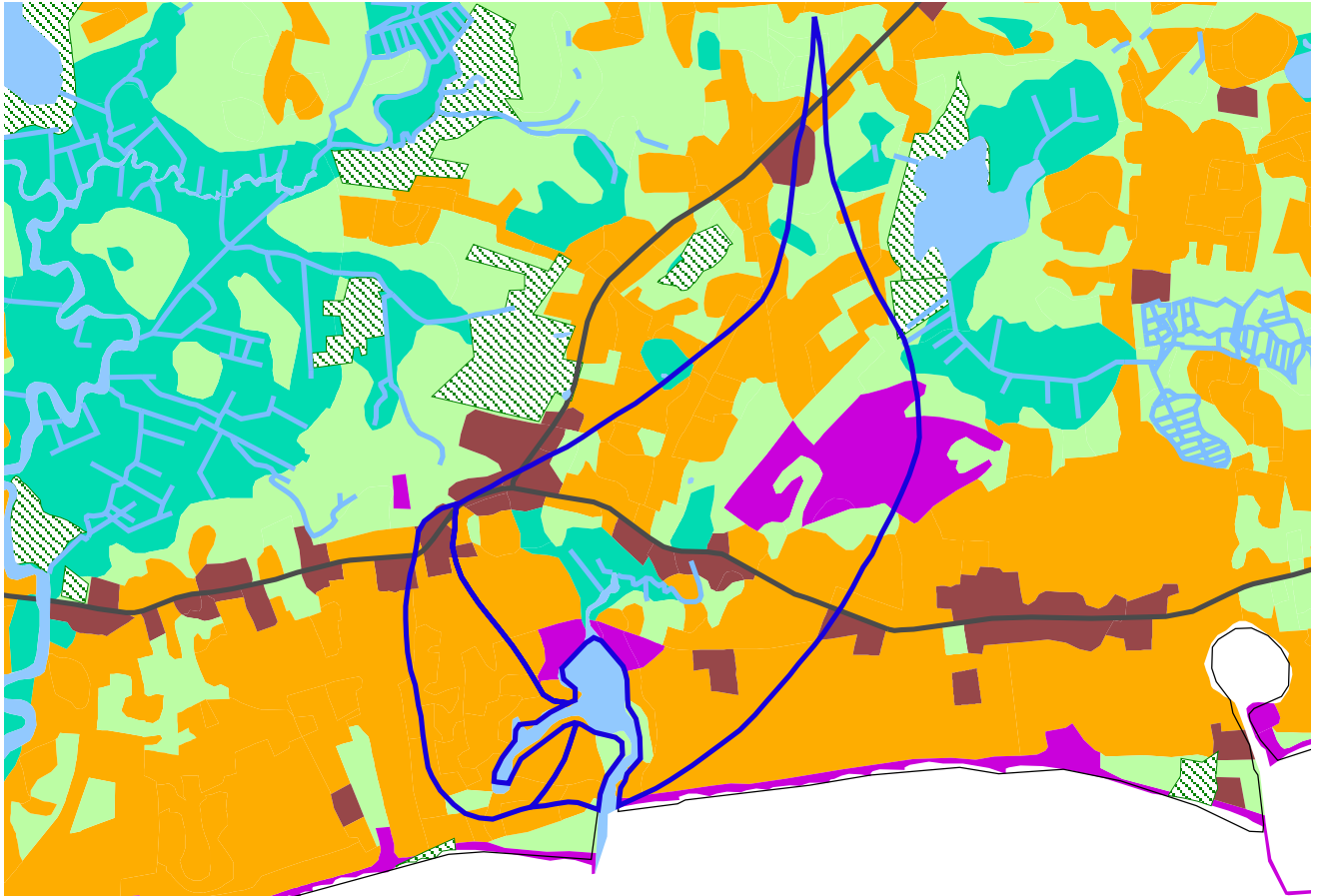
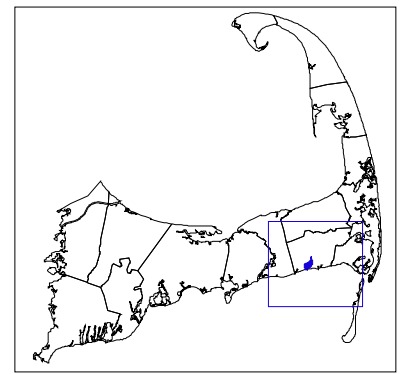
Ponds

Roads



Allens Harbor

Harwich, MA



Land Use



0 0.25 0.5 Miles



Land Use

- non-residential developed
- open land
- recreation
- residential
- water
- wetland

- Streams
- Ponds
- Watershed Boundary
- Protected Open Space

